

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

- 1 1. (Original) A method for making at least one micro lens comprising the steps
2 of:
3 depositing at least one individual portion of a substance to be flowed on a
4 substrate;
5 coating with an adhesion promoter said at least one individual portion of said
6 substance to be flowed and at least the immediate surroundings on said substrate of said
7 at least one individual portion;
8 exposing said coated substrate and said coated at least one individual portion of
9 said substance to be flowed to conditions which cause said substance to be flowed to
10 flow;
11 whereby said at least one individual portion of said substance to be flowed is
12 formed into a micro lens shape without requiring formation of a mesa for said at least one
13 individual portion of substance to be flowed.
- 1 2. (Original) The invention as defined in claim 1 further comprising the step of
2 etching said combined substrate and said at least one individual portion of substance to be
3 flowed after said micro lens shape is formed so that said substrate and said at least one
4 individual portion of substance to be flowed are etched at substantially the same rate.
- 1 3. (Original) The invention as defined in claim 1 wherein further comprising the
2 step of hard baking said combined substrate and said at least one individual portion of
3 substance to be flowed after said micro lens shape is formed.
- 1 4. (Original) The invention as defined in claim 1 wherein said adhesion promoter
2 is hexamethyldisilazane (HMDS).

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1 5. (Original) The invention as defined in claim 1 wherein said coating is a mono
2 layer of said adhesion promoter.

1 6. (Original) The invention as defined in claim 1 wherein said substance to be
2 flowed is a photo resist.

1 7. (Original) The invention as defined in claim 1 wherein, in said coating step,
2 substantially the entire surface of said substrate on which said at least one individual
3 portion of substance to be flowed is deposited is coated by said adhesion promoter.

1 8. (Original) The invention as defined in claim 1 wherein, in said coating step,
2 said adhesion promoter conformally coats said at least one individual portion of said
3 substance to be flowed and said at least immediate surroundings on said substrate.

1 9. (Original) The invention as defined in claim 1 wherein said conditions which
2 cause said substance to be flowed to flow is created at least by heating said substance to
3 be flowed and said substrate.

1 10. (Original) The invention as defined in claim 1 wherein said conditions which
2 cause said substance to be flowed to flow is created at least by exposing said substance to
3 be flowed and said substrate to solvent vapors.

1 11. (Original) The invention as defined in claim 1 further comprising the step of
2 cleaning said substrate from any residue which would prevent adhesion of said adhesion
3 promoter prior to said coating step and after said depositing step.

1 12. (Original) The invention as defined in claim 1 further comprising the step of
2 preconditioning said substrate prior to said coating step and after said depositing step.

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1 13. (Original) The invention as defined in claim 1 wherein said at least one
2 individual portion of a substance to be flowed is at least two portions arranged as an
3 array.

1 14. (Original) The invention as defined in claim 1 further comprising the step of
2 etching substantially only said at least one individual portion of substance to be flowed.

1 15. (Original) At least one micro lens manufactured by a process which
2 comprises the steps of:

3 depositing at least one individual portion of a substance to be flowed on a
4 substrate;

5 coating with a prescribed coating material said at least one individual portion of
6 said substance to be flowed and at least the immediate surroundings on said substrate of
7 said at least one individual portion;

8 exposing said coated substrate and coated portions of said substance to be flowed
9 to conditions which cause said substance to be flowed to flow; and

10 whereby said substance to be flowed forms a lens shape without requiring
11 formation of a mesa for said portion of substance to be flowed.

1 16. (Original) The invention as defined in claim 15 wherein said prescribed
2 coating material is an adhesion promoter.

1 17. (Original) The invention as defined in claim 15 wherein said prescribed
2 coating material is hexamethyldisilazane (HMDS).

1 18. (Original) The invention as defined in claim 15 wherein said portion of a
2 substance to be flowed is photoresist.

1 19. (Original) The invention as defined in claim 15 wherein said at least one
2 micro lens is an array of a plurality of micro lenses each originating from its own
3 respective individual portion of said substance to be flowed.

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1 20. (Currently amended) The invention as defined in claim 15 wherein said at
2 least one micro lens is an array of a plurality of micro lenses at least one two of which
3 originate from a single individual portion of said substance to be flowed.

1 21. (Withdrawn) A micro lens array formed on a substrate, each micro lens of
2 said array being characterized in that it has no visible mesa after its manufacture.

1 22. (Withdrawn) A method for making at least one micro lens comprising the
2 steps of:

3 depositing at least one individual portion of a substance to be flowed on a
4 substrate so that said at least one individual portion of said substance to be flowed has a
5 prescribed footprint; and

6 pinning, with a conformal coating of a prescribed coating material, said at least
7 one individual portion of said substance to be flowed substantially to said footprint so
8 that when said substance to be flowed is exposed to conditions which cause it to flow said
9 substance to be flowed is formed into a lens shape having said footprint.

1 23. (Withdrawn) The invention as defined in claim 22 wherein said prescribed
2 coating material comprises an adhesion promoter.

1 24. (Withdrawn) The invention as defined in claim 22 wherein said conformal
2 coating is a coating of hexamethyldisilazane (HMDS).

1 25. (Withdrawn) A micro lens which was formed from a portion of a substance
2 which was flowed, said substance which was flowed having been contained in at least an
3 initial footprint substantially only by a conformal coating of a prescribed coating material
4 at least traces of which are detectable in the immediate vicinity of said micro lens.

1 26. (Withdrawn) The invention as defined in claim 25 wherein said substance
2 which was flowed comprises a positive photoresist.

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1 27. (Withdrawn) The invention as defined in claim 25 wherein said initial
2 footprint is modified by further etching said at least one micro lens.

1 28. (Withdrawn) The invention as defined in claim 25 wherein said at least one
2 micro lens is a member of an array of a plurality of micro lenses.

1 29. (Withdrawn) The invention as defined in claim 25 wherein said conformal
2 coating is a mono layer.

1 30. (Withdrawn) The invention as defined in claim 21 wherein said micro lens
2 array is manufactured by a process comprising the steps of:

3 depositing a plurality of individual portions of a substance to be flowed on a
4 substrate;

5 coating with a prescribed coating material each of said individual portions of said
6 substance to be flowed and at least the immediate surroundings on said substrate of said
7 individual portions;

8 exposing said coated substrate and coated portions of said substance to be flowed
9 to conditions which cause said substance to be flowed to flow; and

10 whereby each of said individual portions of said substance to be flowed forms a
11 lens shape without requiring formation of a mesa for each of said individual portions of
12 substance to be flowed.

1 31. (Withdrawn) The invention as defined in claim 21 wherein said micro lens
2 array is manufactured by a process comprising the steps of:

3 depositing a plurality of individual portions of a substance to be flowed on a
4 substrate so that said each of said individual portions of said substance to be flowed has a
5 respective prescribed footprint at the location at which it was deposited; and

6 pinning, with a conformal coating of a prescribed coating material, each of said
7 individual portions of said substance to be flowed substantially to its respective
8 prescribed footprint so that when said substance to be flowed is exposed to conditions
9 which cause it to flow said substance to be flowed at each respective location is formed
10 into a lens shape having its respective prescribed footprint.

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